

Amendments to the Claims

This listing of claims will replace all prior versions and listings of all claims in the application.

Claims 1-31 (cancelled)

32. (Currently amended) A method according to claim 24 33 wherein said scoring functions are selected from the group consisting of a Van der Waal's potential scoring function, a hydrogen bond potential scoring function, an atomic solvation scoring function, an electrostatic scoring function and a secondary structure propensity scoring function.

33. (New) A method of screening for variant target proteins with decreased immunogenicity comprising:

a) inputting the three dimensional coordinates of a target protein structure with variable residue positions into a computer;

b) applying to the target structure, in any order:

i) at least one computational protein design algorithm using at least two scoring functions;

ii) an immunogenicity filter that modifies at least one T cell epitope of said target protein by creating a variant of said T cell epitope;

iii) synthesizing one or more of variant target proteins each comprising at least one of said variant T cell epitopes;

iv) testing said plurality for decreased T cell immunogenicity as compared to said target protein; and

v) identifying at least one variant target protein with decreased immunogenicity.

34. (New) A method according to claim 32, wherein said target protein is a cytokine.

35. (New) A method according to claim 32, wherein said target protein is a growth hormone.

36. (New) A method according to claim 33 wherein said synthesizing step comprises providing a host cell comprising a gene encoding said variant protein under conditions wherein said variant protein is expressed.